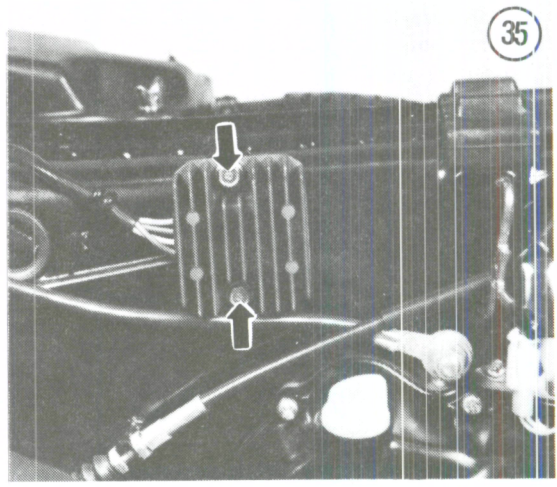
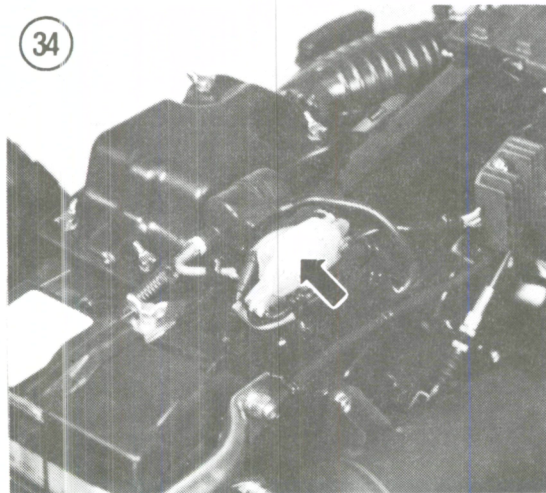


33



35



34

In order to get accurate resistance measurements the stator assembly and coil must be warm (minimum temperature is 68° F/20° C). If necessary, start the engine and let it warm up to normal operating temperature.

#### 1981-on ATC110

To check the lighting coil, use an ohmmeter set at  $R \times 1$  and check for continuity between the white/yellow terminal and ground. If there is no continuity (infinite resistance), the stator assembly must be replaced (the individual coil cannot be replaced).

To check the exciter coil, use an ohmmeter set at  $R \times 1$  and check for continuity between the black/red terminal and ground. If there is no continuity (infinite resistance), the stator assembly must be replaced (the individual coil cannot be replaced).

#### ATC125M

To check the exciter coil, use an ohmmeter set at  $R \times 1$  and check the resistance between the black/red terminal and ground. There should be continuity (specified resistance of 100-400 ohms). If there is no continuity (infinite resistance) or the resistance value is not within these limits, the stator assembly must be replaced (the individual coil cannot be replaced).

To check the charging coil, use an ohmmeter set at  $R \times 1$  and check the resistance between both yellow terminals within the connector. There should be continuity (specified resistance of 0.5-1.5 ohms). If there is no continuity (infinite resistance) or the resistance value is not within these limits, the stator assembly must be replaced (the individual coil cannot be replaced). Also check for continuity between each yellow terminal and ground. If there is continuity (low resistance), the coil is shorted and the stator assembly must be replaced (the individual coil cannot be replaced).

#### NOTE

*There is no lighting coil on this model.*

#### VOLTAGE REGULATOR/RECTIFIER (MODELS SO EQUIPPED)

##### Removal/Installation

1. Remove the seat/rear fender assembly.
2. Disconnect the battery negative lead.
3. Remove the screws securing the starter solenoid cover and remove the cover (Figure 33).
3. Disconnect the electrical connector to the voltage regulator/rectifier (Figure 34) from the wiring harness.
4. Remove the bolts (Figure 35) securing the voltage regulator/rectifier to the frame.

5. Remove the voltage regulator/rectifier, electrical connector and wires.
6. Install by reversing these removal steps. Make sure all electrical connectors are tight.

### Testing

To test the voltage regulator/rectifier, disconnect the electrical connector from the wiring harness (Figure 34).

#### NOTE

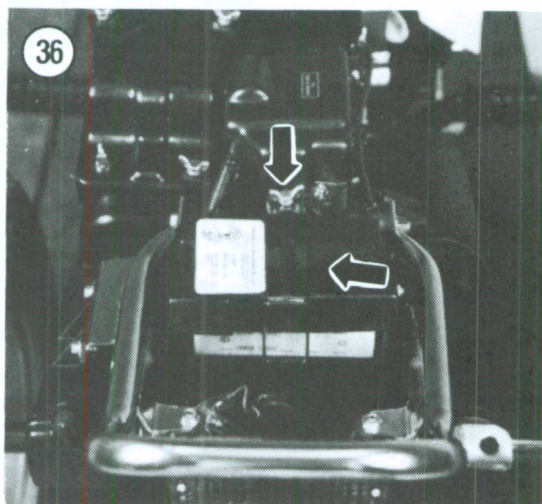
*Tests must be made with a quality ohmmeter or the test readings may be false.*

Make the test measurements using a quality ohmmeter. Refer to **Table 1** for ohmmeter positive (+) and negative (-) test lead placement and specified resistance values.

If the voltage regulator/rectifier unit fails *any one* of the tests, the unit is faulty and must be replaced.

### Voltage Regulator Performance Test

1. Remove the seat/rear fender assembly.
2. Remove the wing nuts securing the battery cover (Figure 36) and remove the battery cover.
3. Leave the battery cables attached and connect a DC voltmeter to the battery as shown in Figure 37.
4. Start the engine and let it idle.
5. Increase engine speed until the voltage going to the battery reaches 14.0-15.0 volts.
6. At this point, the voltage regulator/rectifier should prevent any further increase in voltage. If this does not happen and the voltage increases above specification, the voltage regulator/rectifier is faulty and must be replaced.

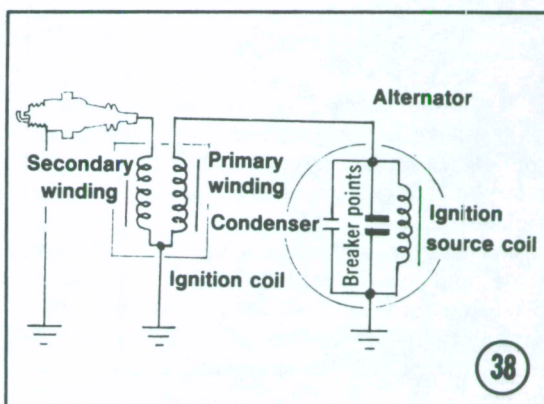
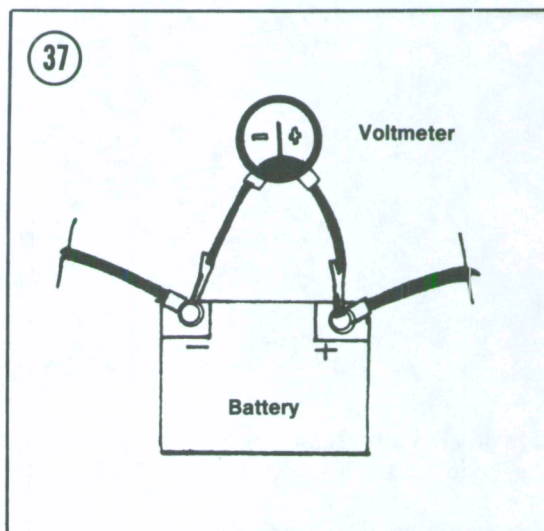


### CONTACT BREAKER POINT IGNITION

Contact breaker point ignition is used on all models except the 1981-on ATC110 and the ATC125M. These are equipped with an electronic ignition system that is covered separately in this chapter.

As the rotor of the alternator turns, magnets located in it move past a stationary ignition source coil on the stator, inducing a current in the coil. A contact breaker assembly that is actuated by a cam (attached either to the crankshaft or camshaft), opens at the precise instant the piston reaches its firing position. The energy produced in the source coil is then discharged to the primary side of the ignition coil where the voltage is stepped up on the secondary circuit to a value sufficient to fire the spark plug.

Figure 38 shows a typical contact breaker point ignition system. For a specific model, refer to the electrical diagrams at the end of this book.



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